

**What is claimed is:**

1. A concentrator connected to a network, comprising:
  - (a) a terminal interface to which a terminal is connected;
  - (b) a line interface connected to said network;
  - 5 (c) a communication function unit for controlling at least a voice signal and an IP packet input/output in said terminal interface and said line interface;
  - (d) a conversion unit for converting said IP packet and said voice signal to each other;
- 10 (e) a memory for storing an IP address of said concentrator; and  
(f) a connection establishing unit for establishing a connection between said terminal and another terminal connected to said network, by allowing said communication function unit to transmit an IP datagram including the IP address of said concentrator to said network.
- 15 2. The concentrator of claim 1, further comprising:  
a determining unit for determining whether or not said terminal connected to said terminal interface is capable of an IP communication, wherein
  - (i) when said determining unit determines that said terminal is capable of the IP communication, an IP packet input from said line interface is outputted to said terminal interface as it is, and an IP packet input from said terminal interface is outputted to said line interface as it is; and
  - (ii) when said determining unit determines that said terminal is not capable of the IP communication, the IP packet input from said line interface is converted to a voice signal by said conversion unit and outputted to said terminal interface, while a voice signal input from said terminal interface is

converted to an IP packet and outputted to said line interface.

3. The concentrator of claim 2,

wherein when said terminal connected to said terminal interface is said  
5 standard telephone, it is determined that said terminal is not capable of IP  
communication.

4. The concentrator of claim 3,

wherein by receiving a dialing of the standard telephone as an IP address  
10 of a call destination, the connection to a terminal having the IP address of the  
call destination is established.

5. The concentrator of claim 4,

wherein when the connection is established, said concentrator transmits  
15 the IP datagram including the IP address of said concentrator to the terminal  
having the IP address of the call destination.

6. The concentrator of claim 2,

wherein when said terminal connected to said terminal interface is a  
20 computer, it is determined that said terminal is capable of an IP  
communication.

7. The concentrator of claim 6,

wherein said concentrator allows an IP datagram transmitted from said  
25 computer pass as it is, to a terminal having an IP address designated by said  
computer.

8. The concentrator of claim 7,  
wherein when said computer establishes a connection, said concentrator  
transmits an IP datagram including an IP address of said computer to a  
terminal having IP address designated by said computer.